

WHAT IS CLAIMED IS:

1. A mono-layer or multi-layer film, sheet, or coating wherein at least one layer
5 displays a surface microstructure, which layer comprises a thermoplastic polymeric material
selected from the group consisting of
- a biodegradable polymer, preferably poly(lactide),
 - a polyvinyl chloride, and
 - a polyolefin interpolymer comprising
- 10 i) polymer units derived from at least one of ethylene and/or an alpha-olefin
monomer; and
- ii) polymer units derived from one or more vinyl or vinylidene aromatic
monomers and/or one or more sterically hindered aliphatic or cycloaliphatic
vinyl or vinylidene monomers, or a combination of at least one aromatic vinyl
15 or vinylidene monomer, and
- iii) optionally polymer units derived from one or more ethylenically unsaturated
polymerizable monomer(s) other than those derived from i) and ii),
and which layer is characterized by substantially solid fibril-like fringes.
- 20 2. A mono-layer or multi-layer film, sheet, or coating wherein at least one layer
displays a surface microstructure, which layer is a cured, irradiated or cross-linked
thermoplastic polymeric material and which layer is characterized by substantially solid fibril-
like fringes.
- 25 3. A mono-layer or multi-layer film, sheet, or coating wherein at least one layer
displays a surface microstructure, which layer is a thermoplastic polymeric material and is
characterized by substantially solid fibril-like fringes, and wherein at least one layer is a
foamed layer.
- 30 4. A mono-layer or multi-layer film, sheet, or coating wherein at least one layer
displays a surface microstructure, which layer is a thermoplastic polymeric material and is
characterized by substantially solid fibril-like fringes, and wherein at least one layer is elastic.

5. A mono-layer or multi-layer film, sheet, or coating wherein at least one layer displays a surface microstructure, which layer is a thermoplastic polymeric material and is characterized by substantially solid fibril-like fringes, and wherein at least one layer has been oriented.

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6. A mono-layer or multi-layer film, sheet, or coating wherein at least one layer displays a surface microstructure, which layer is a thermoplastic polymeric material and is characterized by substantially solid fibril-like fringes, and wherein at least one layer is printed or imprinted, preferably the layer having the fringed surface microstructure.

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7. A mono-layer or multi-layer film, sheet, or coating wherein at least one layer displays a surface microstructure, which layer is a thermoplastic polymeric material and is characterized by substantially solid fibril-like fringes, wherein the surface microstructure has been subjected to a post treatment step selected from the group consisting of corona treatment, curing, irradiation and crosslinking.

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8. A glove comprising a mono-layer or multi-layer film or coating wherein at least one layer displays a surface microstructure, which layer is a thermoplastic polymeric material and is characterized by substantially solid fibril-like fringes.

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9. A medicinal collection bag, preferably an ostomy bag, comprising a mono-layer or multi-layer film or coating wherein at least one layer displays a surface microstructure, which layer is a thermoplastic polymeric material and is characterized by substantially solid fibril-like fringes.

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10. A floor or wall covering product comprising a mono-layer or multi-layer film, sheet or coating wherein at least one layer displays a surface microstructure, which layer is a thermoplastic polymeric material and is characterized by substantially solid fibril-like fringes.

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11. An water repellant article of manufacture comprising a mono-layer or multi-layer film, sheet, or coating wherein at least one layer displays a surface microstructure, which layer is a thermoplastic polymeric material and is characterized by substantially solid fibril-like fringes.

12. A packaging article comprising a mono-layer or multi-layer film, sheet or coating wherein at least one layer displays a surface microstructure, which layer is a thermoplastic polymeric material and is characterized by substantially solid fibril-like fringes.

5 13. An article of manufacture which has anti-skid properties, said article comprising a mono-layer or multi-layer film, sheet or coating wherein at least one layer displays a surface microstructure, which layer is a thermoplastic polymeric material and is characterized by substantially solid fibril-like fringes.

10 14. A heat resistant article of, said article comprising a mono-layer or multi-layer film, sheet or coating wherein at least one layer displays a surface microstructure, which layer is a thermoplastic polymeric material and is characterized by substantially solid fibril-like fringes.

15 15. A process for making a fringed film, sheet, or coating, said process comprising
- providing a foamed precursor film, sheet, or coating with a surface characterized by a pattern of peaks and valleys, and
subjecting said precursor to mechanical treatment under conditions allowing the formation of a fringed surface microstructure.

20 16. Use of a film, sheet or coating comprising a mono-layer or multi-layer film, sheet or coating wherein at least one layer displays a surface microstructure, which layer is a thermoplastic polymeric material and is characterized by substantially solid fibril-like fringes to make an article which is water repellant.

25 17. Use of a film, sheet or coating comprising a mono-layer or multi-layer film, sheet or coating wherein at least one layer displays a surface microstructure, which layer is a thermoplastic polymeric material and is characterized by substantially solid fibril-like fringes for packaging.

30 18. Use of a film, sheet or coating comprising a mono-layer or multi-layer film, sheet or coating wherein at least one layer displays a surface microstructure, which layer is a thermoplastic polymeric material and is characterized by substantially solid fibril-like fringes to make an article with enhanced carrying, capturing or storing properties.

19. Use of a film, sheet or coating comprising a mono-layer or multi-layer film, sheet or coating wherein at least one layer displays a surface microstructure, which layer is a thermoplastic polymeric material and is characterized by substantially solid fibril-like fringes to make an article which has anti-skid properties.

20. Use of a film, sheet or coating comprising a mono-layer or multi-layer film, sheet or coating wherein at least one layer displays a surface microstructure, which layer is a thermoplastic polymeric material and is characterized by substantially solid fibril-like fringes to make an article which has enhanced heat resistant.

21. Use of a film, sheet or coating comprising a mono-layer or multi-layer film, sheet or coating wherein at least one layer displays a surface microstructure, which layer is a thermoplastic polymeric material and is characterized by substantially solid fibril-like fringes as a filtration medium or to make a filtering device.

22. Use of a biodegradable polymer, preferably poly(lactide), to make a film, sheet or coating comprising a mono-layer or multi-layer film, sheet or coating wherein at least one layer displays a surface microstructure, which layer is a thermoplastic polymeric material and is characterized by substantially solid fibril-like fringes.

23. Biodegradable article of manufacture comprising a mono-layer or multi-layer film, sheet or coating wherein at least one layer displays a surface microstructure, which layer is a thermoplastic polymeric material, preferably poly(lactide), and is characterized by substantially solid fibril-like fringes.